

Intel's SECC2 Packaging

December 1998

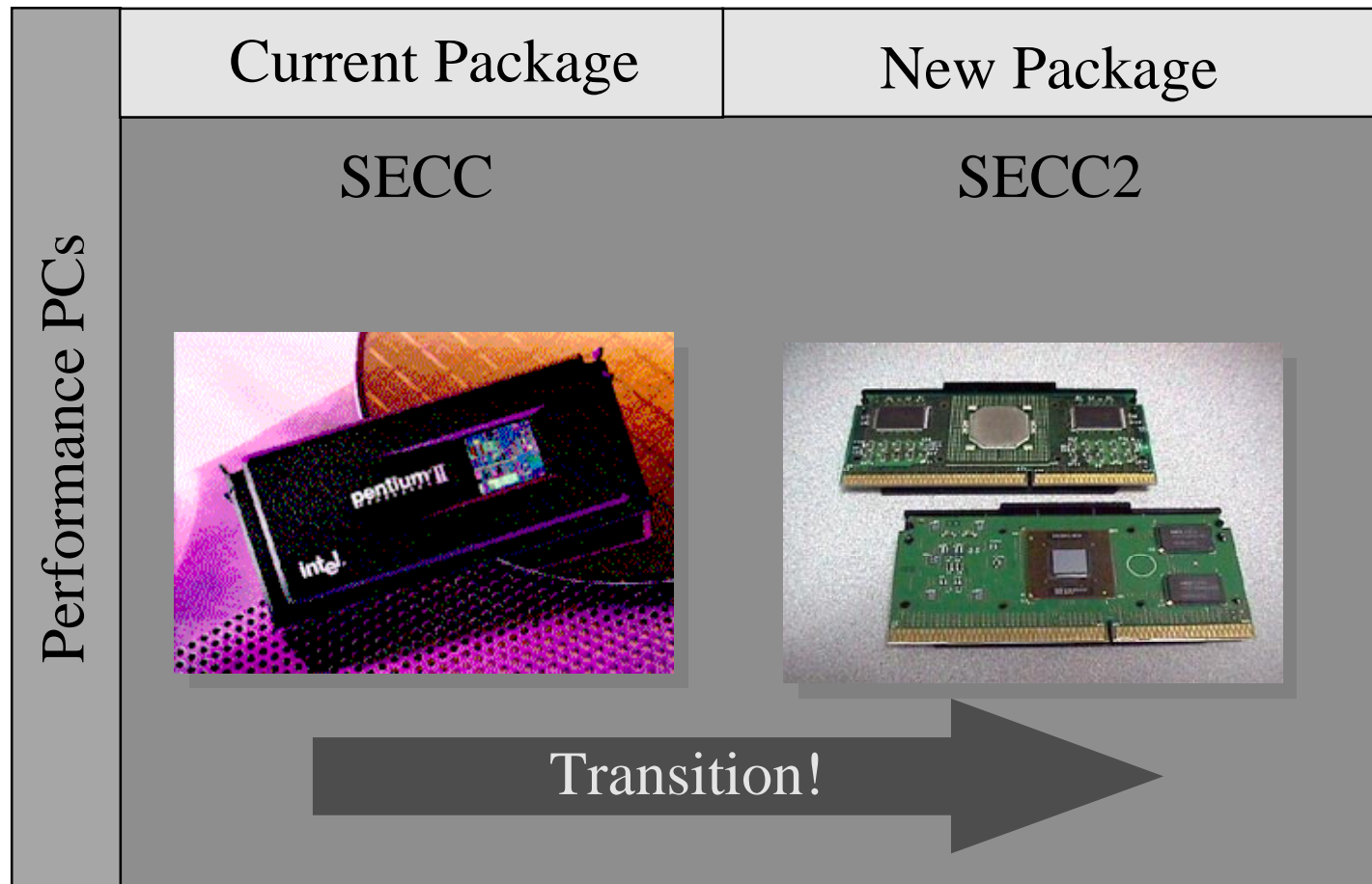
<http://developer.intel.com>

Objective

Provide a consolidated summary and reference of available SECC2 enabling information.

Detailed information pertaining to items described in the presentation will be posted to this website as it becomes available.

Intel Performance PC Package Transition



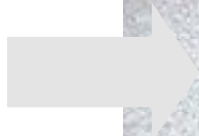
SECC2 Transition Timeframe

- **Per PCN #685, Pentium® II 350MHz PLGA core processor will become available in the SECC2 form factor in Nov '98**
 - ▲ Limited volume
 - ▲ 350MHz ONLY
- **Per PCN #723, Pentium II 400MHz/450MHz OLGA core processors will convert to SECC2 in Q1'99**
 - ▲ PCN #723 available in the PCN Index on <http://developer.intel.com>
- **Motherboards readiness requires a new retention module:**
 - ▲ Intel has enabled a Universal Retention Module (URM) for SEPP, SECC, & SECC2
 - ▲ The Intel® Celeron™ processor Retention Module is also SECC2 capable
- **New heat sink required for SECC2**
- **SECC will maintain very limited availability through '99 at a price premium**
 - ▲ SECC product discontinuance notification planned in Q2 '99

SECC2 Package

- Two versions (PLGA version is limited)

PLGA



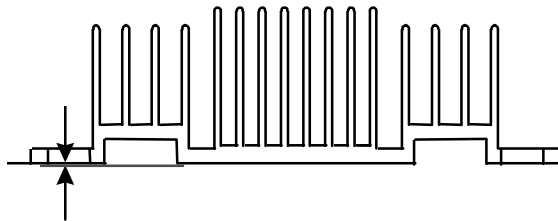
OLGA



- PLGA SECC2 and OLGA SECC2 each require unique heatsink
- Same clip, retention mechanism, thermal interface material, and assembly/disassembly tools

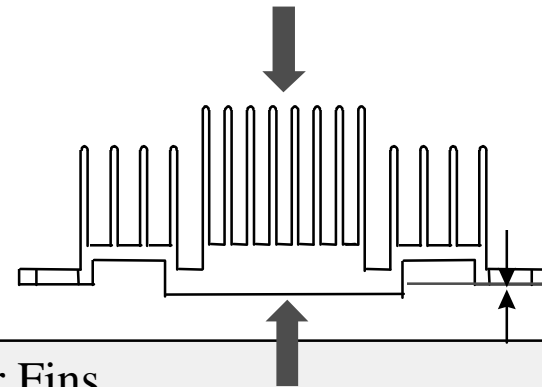
PLGA/OLGA Heat Sink Differences

PLGA



Inside of flange is coplanar with processor interface surface.

OLGA



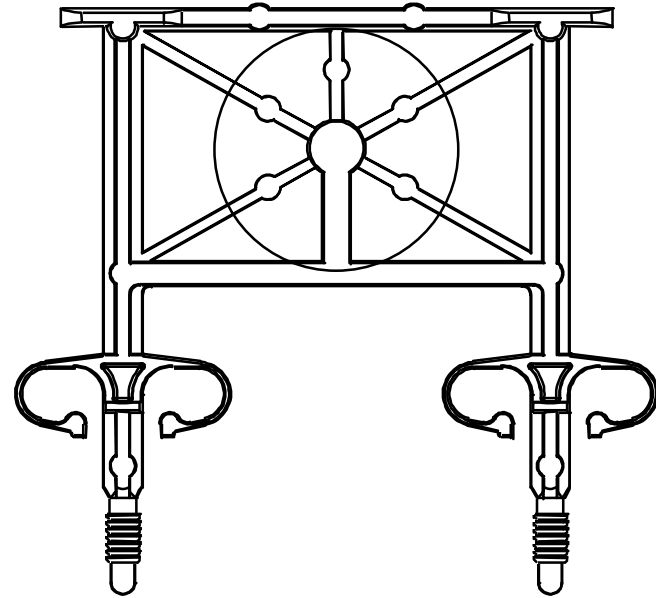
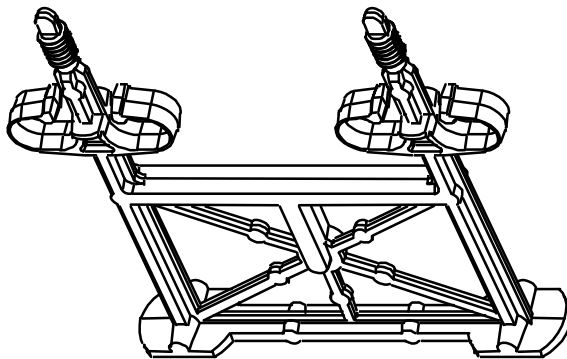
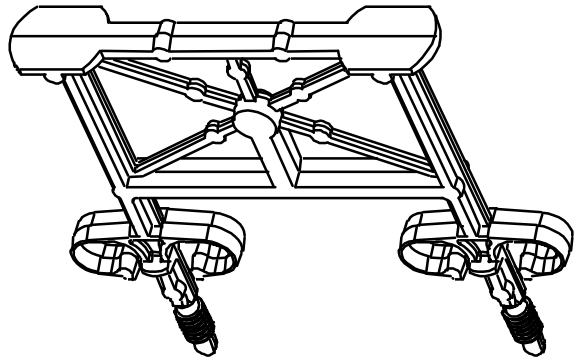
- Taller Fins
- Thicker Base
- Inside of flange is offset 0.050" from processor interface surface

Thermal Metrology varies.

See Pentium® II processor datasheet on developer.intel.com

Order Number 243657-003

Heat Sink Clip



- Intel has enabled this heat sink clip.
- See the “Support Components” on developer.intel.com for suppliers

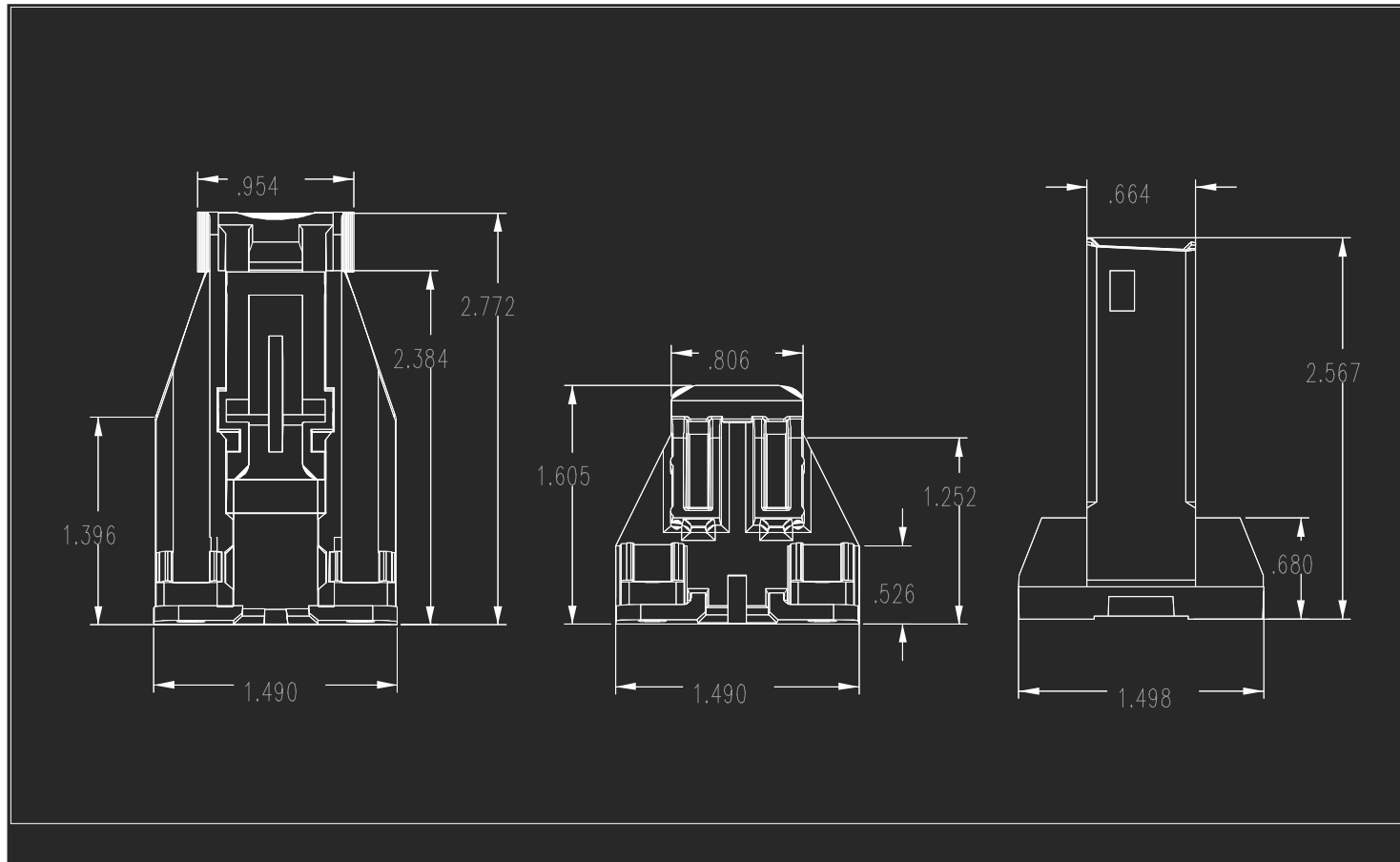
Active Heat Sinks

- A boxed processor is also available which is complete with active heatsink
 - ▲ See Pentium® II processor datasheet on developer.intel.com
 - ◆ Order Number 243657-003
- Active Heat Sink solutions are being enabled
 - ▲ Watch “Support Components” on developer.intel.com for suppliers
 - ◆ PLGA solution uses custom heat sink attach process
 - ◆ OLGA solution requires plastic clips
- Active Heat Sink Clips
 - ▲ Intel has developed a clip for use with active heatsinks as well
 - ▲ Watch “Support Components” on developer.intel.com for suppliers

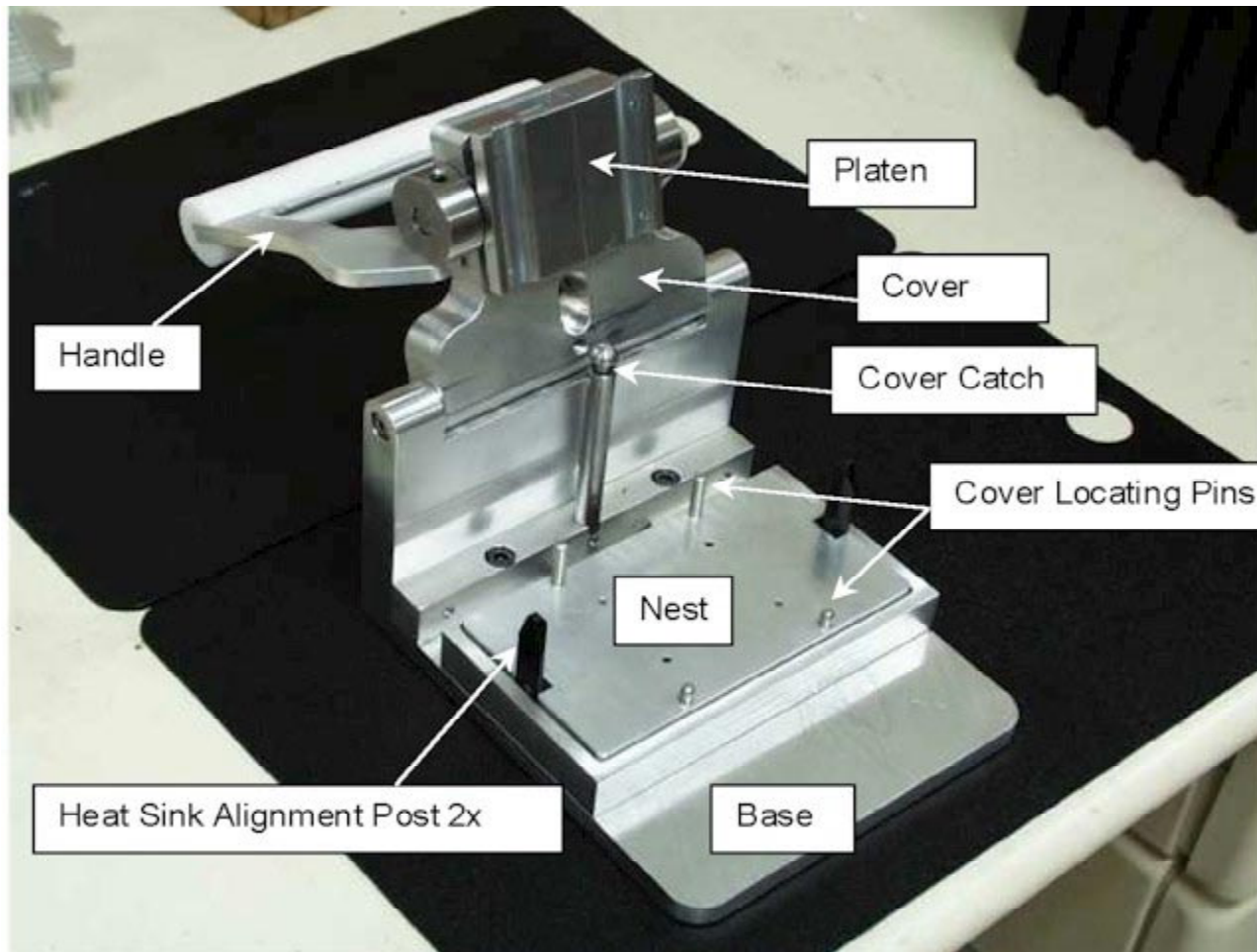


URM, S.E.P.P., S.E.C.C. Retention Mechanisms

- Consider the amount of the retention mechanism flex when designing motherboard layout



SECC2 Heat Sink Assembly Fixture

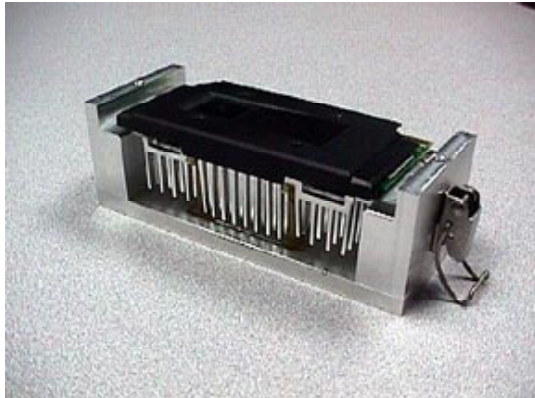


Vendor : Napco


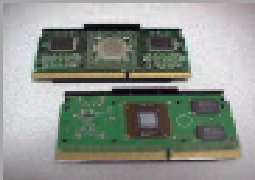

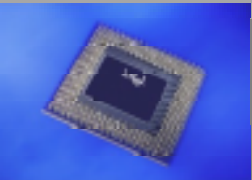
Designed only for the
Intel-enabled clips
for both PLGA and
OLGA SECC2
packages

SECC2 Heat Sink Disassembly Fixture

Vendor : Napco



Intel Processor Packaging Summary Table

	<i>SECC</i>	<i>SECC2</i>	<i>SEPP</i>	<i>PPGA</i>
				
Heat sink Weight	ATXV2 237 grams	SECC2 Heat sink 130 grams	SEPP only H/S 130 grams	PPGA H/S 85 grams
Dissipation	40 Watts	36 Watts	20 Watts	35 Watts
Attach Locations	Interfaces with thermal plate	Substrate holes	Substrate holes	Attaches to top of component
Connector	SC242	SC 242	SC 242	PGA370 Socket
Heat sink support	Required	Not Required	Not Required	Not applicable
Retention Mechanism Support	Universal RM Standard RM Integrated RM	Universal RM Intel®Celeron™ RM	Universal RM Intel Celeron RM	Not applicable
Heat sink Clip	Riv screws	SECC2 H/S Clip	Intel Celeron SEPP H/S clips	Similar to Socket 7
Thermal Interface Options	Various	Chomerics 443 Thermal Grease	Chomerics 7-10 Thermal Grease	Chomerics 443 Thermal Grease
RMAM's	Required with metal fastener RM	Required with metal fastener RM	Required with metal fastener RM	Not applicable